



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,879	08/22/2003	Mikio Yamazaki	1639.1035	8668

21171 7590 09/07/2005

STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

DOE, JANIS L

ART UNIT	PAPER NUMBER
----------	--------------

1756

DATE MAILED: 09/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/645,879

Applicant(s)

YAMAZAKI, MIKIO

Examiner

Janis L. Dote

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/27/05.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 3, 4, 9, and 11-13 is/are allowed.
6) ☒ Claim(s) 1, 2, 5-8 and 10 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 22 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Art Unit: 1756

1. The examiner acknowledges the amendments to claims 1 and 9 set forth in the amendment filed on Jun. 27, 2005. Claims 1-13 are pending.

2. The rejections of claims 1, 5, and 7-10 under 35 U.S.C. 112, second paragraph, set forth in the office action mailed on Mar. 25, 2005, paragraph 5, have been withdrawn in response to the amendments to claims 1 and 9 set forth in the amendment filed on Jun. 27, 2005.

The rejections under 35 U.S.C. 103(a) of claims 1, 2, and 5-10 over Japanese Patent 2002-107972 (JP'972) combined with US 4,518,669 (Yashiki) and the other cited references set forth in the office action mailed on Mar. 25, 2005, paragraphs 10-12, have been withdrawn in response to the amendments to claims 1 and 9 set forth in the amendment filed on Jun. 27, 2005.

The amendment to claim 1 adds the limitations (1) that the undercoat layer comprising the thermosetting resin is "directly" formed on the conductive substrate; and (2) that the charge generation layer is "directly" formed on the undercoat layer. JP'972 does not exemplify an undercoat layer comprising a thermosetting resin. Yashiki teaches an intermediate layer comprising a thermosetting resin that is located between a conductive substrate and an undercoat layer, wherein a charge

Art Unit: 1756

generation layer is formed on the undercoat layer. The Yashiki layer structure is not within the scope of the layer structure recited in instant claim 1.

The amendment to claim 9 requires that the charge generation layer comprise an amorphous titanylphthalocyanine as the charge generation material and an organic binder resin having the particular molecular weight properties as recited in instant claim 9, wherein the amorphous titanylphthalocyanine is present in the weight ratio of 7/3 to 5/5 of amorphous titanylphthalocyanine to the binder resin. None of the cited prior art teaches or suggests a charge generation layer comprising an amorphous titanylphthalocyanine and the particular organic binder resin where the amorphous titanylphthalocyanine is present in the weight ratio recited in instant claim 9.

3. The recitation "overlapping range in molecular weight distributions" in claim 3 is defined in the instant specification in paragraphs 0037-0040, when the conditions (1) or (2), as described in paragraphs 0039 and 0040, respectively, are satisfied.

In the response filed on Dec. 23, 2004, applicant stated that the conditions (1) and (2) disclosed in paragraphs 0037-0040 of the instant specification "when two

Art Unit: 1756

molecular weight distributions are defined to be 'overlapping' are believed to be clear."

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1, 5, 7, 8, and 10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

Instant claim 1 recites that the "polydispersity . . . of the organic binder resin is at least 4.0 and a weight average molecular weight of poly(vinyl acetal) utilized in the organic binder resin is at least 7.0×10^4 in a distribution of a polystyrene-converted molecular weight obtained by gel permeation chromatography, and the organic binder [sic] is poly(vinyl acetal)."

Art Unit: 1756

The originally filed specification does not provide an adequate written description of said "organic binder poly(vinyl acetal)" resin broadly recited in instant claim 1. The originally filed specification discloses that the organic binder resin in the charge generation layer having the particular molecular weight properties recited in instant claim 1 can be either (1) "substantially composed of poly(vinyl acetal) represented by" the chemical formula (1) disclosed at page 5, lines 8-10 or (2) "substantially composed of a mixture of two or more types of the poly(vinyl acetal) [of formula (1)] that have different weight average molecular weights and have an overlapping range in molecular weight distributions."

Originally filed specification, page 5, lines 6-14. The limitation "organic binder is poly(vinyl acetal)" recited in instant claim 1 is broader than the disclosed organic binder resin "substantially composed of" the poly(vinyl acetal) represented by formula (1) because it encompasses poly(vinyl acetal) resins that are not "substantially composed" of the particular poly(vinyl acetal) of formula (I) or of the particular combination of poly(vinyl acetal) resins of formula (1) disclosed in the originally filed specification.

Applicants' arguments filed Jun. 27, 2005, have been fully considered but they are not persuasive.

Art Unit: 1756

Applicant asserts that the originally filed specification in paragraph [0036] provides antecedent basis for the binder resin to be a poly(vinyl acetal) resin that is not represented by Formula (1).

However, the originally filed specification in paragraph [0036] does not provide an adequate written description for the "poly(vinyl acetal)" resin broadly recited in instant claim 1. The originally filed specification in paragraph [0036], lines 1-8, states that the organic binder resin in the charge generation layer having the molecular weight properties recited in instant claim 1 can be a "single type of resin . . . a mixture of plural types of organic binder resins is preferable . . . a preferred mixture . . . is obtained by mixing low molecular poly(vinyl acetal) having a polystyrene-converted weight average molecular weight of 1.0×10^4 to 7.0×10^4 with medium to high molecular weight poly(vinyl acetal) having a polystyrene-converted weight average molecular weight of 8.0×10^4 to 1.8×10^5 . Each such mixture has a molecular weight distribution before mixing that has an overlapping range." In other words, the originally filed specification in paragraph [0036] discloses that the organic binder resin can be a generic resin or a mixture of generic resins, or a mixture of two particular poly(vinyl acetal) resins having particular

Art Unit: 1756

weight average molecular weights. The originally filed specification in paragraph [0036] does not teach that the organic binder resin can be the subgenus "poly(vinyl acetal)" broadly recited in the instant claim 1. Thus, the originally filed specification teaches that the organic binder resin having the particular molecular weight properties recited in instant claim 1 can be one of the following species: (1) "substantially composed of poly(vinyl acetal) represented by" the chemical formula (1) disclosed at page 5, lines 8-10; (2) "substantially composed of a mixture of two or more types of the poly(vinyl acetal) [of formula (1)] that have different weight average molecular weights and have an overlapping range in molecular weight distributions"; or (3) the preferred mixture of the two particular poly(vinyl acetal) resins having the particular weight average molecular weights disclosed in paragraph [0036]. The subgenus "poly(vinyl acetal)" recited in instant claim 1 is broader than the disclosed three particular species. Accordingly, the rejection stands.

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Art Unit: 1756

7. Claims 1, 2, 5-7, and 10 are rejected under 35

U.S.C. 103(a) as being unpatentable over Japanese Patent 2002-

107972 (JP'972), as evidenced by Grant & Hackh's Chemical

Dictionary, page 277 and the CRC Handbook of Chemistry and

Physics, 48th edition, page B-177; combined with US 6,355,390 B1

(Yamanami), as evidenced by applicant's admission that melamine is a thermosetting resin and that titanium oxide can be used as

the fine particles that perform the functions of scattering

exposed light and transporting photo-generated charges to the

substrate disclosed in paragraph 0030 of the instant

specification (applicant's admission I). See the USPTO English-

language translation of JP'972 for cites.

JP'972 discloses an organic electrophotographic

photoconductor comprising an aluminum conductive substrate

having thereon in order, an electroconductive layer, an

undercoating layer, a charge generation layer, and a charge

transport layer. See the USPTO translation, example 1 in

paragraphs 0056-0062 and in Table 1 at page 19. The charge

generation layer comprises a hydroxygallium phthalocyanine as

the charge generation material and a poly(vinyl butyral) resin,

which has a weight average molecular weight (Mw) of 3.0×10^5 and

a number average molecular weight (Mn) of 5.4×10^4 . Thus, the

ratio of Mw/Mn is 5.56. See the USPTO translation,

Art Unit: 1756

paragraph 0058 and Table 1. The weight average molecular weight is determined by gel permeation chromatography using polystyrene as the standard. See the USPTO translation, paragraphs 0035-0036. The poly(vinyl butyral) resin is represented by the chemical structure disclosed in paragraph 0015 of the translation. The poly(vinyl butyral) disclosed by JP'972 is within the binder resin compositional limitation recited in instant claim 2. The Mw and the ratio of Mw/Mn are within the Mw and the ratio Mw/Mn ranges recited in instant claim 1. The hydroxygallium phthalocyanine meets the charge generation material limitation recited in instant claim 7. Gallium has a specific gravity of 5.904 when a solid and a specific gravity of 6.095 when a liquid. See the CRC Handbook of Chemistry and Physics, 48th edition, page B-177. A heavy metal is defined as a metal having a specific gravity greater than 4. See Grant & Hackh's Chemical Dictionary, page 277. Thus, gallium is a heavy metal. The term "a heavy metal" recited in instant claim 10 encompasses the hydroxygallium core in the JP'972 hydroxygallium phthalocyanine. Accordingly, the JP'972 hydroxygallium phthalocyanine meets the core limitation "a heavy metal" recited in instant claim 10.

JP'972 does not exemplify a photoconductor wherein the undercoat layer is directly placed on the conductive substrate

Art Unit: 1756

as recited in instant claim 1. Nor does JP'972 exemplify the use of an undercoat layer comprising a thermosetting resin as recited in instant claim 1.

However, JP'972 teaches that the electroconductive layer exemplified in example 1 of JP'972 is an optional feature. See the USPTO translation, paragraph 0023. In paragraph 0023, JP'972 teaches that any support can be used "as long as it is electroconductive. Examples of the materials that can be used include aluminum, aluminum alloy, copper, zinc . . . Other supports that can be used include . . . supports formed by coating electroconductive particles . . . together with the appropriate binding resin on plastics or the aforementioned supports." As discussed supra, the electroconductive layer is coated on an aluminum cylinder. As discussed supra, JP'972 teaches that the aluminum cylinder, by itself, is an acceptable electroconductive support for its photoconductive.

JP'972 also does not limit the composition of the undercoat layer. USPTO translation, paragraph 0024. JP'972 teaches that "it is possible to form an undercoating layer with barrier function and adhesive function between the support and the photosensitive layer. Examples of the materials that can be used for the undercoating layer include . . . polyamide (nylon . . . N-alkoxylated nylon, etc.) . . . etc."

Art Unit: 1756

Yamanami teaches that it is known in the art to use an undercoat layer between the electroconductive support and the photoconductive layer, for example, to improve the adhesion of the photoconductive layer to the support, to improve the coating characteristics and charging characteristics of the photoconductive layer, to inhibit unnecessary charges from injecting from the support into the photoconductive layer, and to compensate for any defects on the support. Col. 1, lines 25-36. Yamanami discloses a particular undercoat layer that is directly formed on an aluminum conductive substrate between the substrate and a photosensitive layer comprising in order a charge generation layer and a charge transport layer. The undercoat layer comprises untreated titanium oxide particles with a purity of 99.7 wt% dispersed in a crosslinked binder resin. The undercoat layer is formed by coating the aluminum substrate with a coating composition comprising the titanium oxide particles dispersed in a mixture of a methoxymethylated polyamide and a methylated melamine resin, and then heating the coated layer. Col. 5, lines 1-4, and example 22 at col. 50, line 41, to col. 51, line 31. The instant specification in paragraph 0030 discloses that the thermosetting resin includes melamine. Thus, the intermediate layer disclosed by Yamanami meets the undercoating layer compositional limitation recited in

Art Unit: 1756

instant claim 1. According to Yamanami, a photoconductor, which comprises the Yamanami undercoat layer directly formed on the conductive support between the conductive support and the photosensitive layer, has high durability, and "constantly" provides "high quality images even though the photoconductor is repeatability used under circumstances of high temperature and humidity or low temperature and humidity." Col. 4, lines 36-42, and Table 8 at col. 52, example 22. Yamanami further teaches that the photoconductor is "free from the occurrence of discharge breakdown, and the increase in residual potential," and can be manufactured at a low cost. Col. 4, lines 43-49.

Yamanami does not explicitly disclose that its titanium oxide particles "perform functions of scattering exposure light and transporting photo-generated charges to the substrate," as recited in instant claims 5 and 6. However, Yamanami teaches that "it is well known that an inorganic pigment such as titanium oxide is dispersed in the undercoat layer to effectively compensate for the defects in the surface of the electroconductive support and to enhance the light scattering effect of coherent light such as a laser beam and prevent the interference fringes." Col. 2, lines 58-65. The instant specification in paragraph 0030 also discloses that the titanium oxide particles can be used as the fine particles that perform

Art Unit: 1756

functions of scattering exposure light and transporting photo-generated charges to the substrate. Thus, it is reasonable to presume that the untreated titanium oxide particles disclosed by Yamanami perform the functions recited in instant claims 5 and 6. The burden is on applicant to prove otherwise. In re Fitzgerald, 205 USPQ 594 (CCPA 1980).

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of JP'972 and Yamanami, to remove the electroconductive layer and to use the Yamanami undercoat layer as the undercoat layer in the photoconductor in example 1 of JP'972, such that the undercoat layer is formed directly on the aluminum conductive substrate and the charge generation layer is formed directly on the undercoat layer as taught by Yamanami and JP'972. That person would have had a reasonable expectation of successfully obtaining an electrophotographic photoconductor that has high durability, that is "free from the occurrence of discharge breakdown and the increase in residual potential," and that "constantly" provides high quality images as disclosed by Yamanami.

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP'972, as evidenced by Grant & Hackh's

Art Unit: 1756

Chemical Dictionary, page 277 and the CRC Handbook of Chemistry and Physics, 48th edition, page B-177; combined with Yamanami, as evidenced by applicant's admissions I, as applied to claim 1 above, further combined with US 5,302,479 (Daimon), as evidenced by the DERWENT abstract Acc. No. 1992-392116. See the USPTO English-language translation of JP'972 for cites.

JP'972, as evidenced by Grant & Hackh's Chemical Dictionary, page 277 and the CRC Handbook of Chemistry and Physics, 48th edition, page B-177, combined with Yamanami, as evidenced by applicant's admissions I, renders obvious the photoconductor described in paragraph 7 above, which is incorporated herein by reference.

JP'972 does not exemplify a phthalocyanine as recited in instant claim 8. However, JP'972 teaches that the hydroxygallium phthalocyanine can be the hydroxygallium phthalocyanine disclosed in Japanese Patent 05-263007 (JP'007) having strong Bragg angles ($2\theta \pm 2^\circ$) of 7.5° , 9.9° , 12.5° , 16.3° , 18.6° , 25.1° , and 28.3° for the characteristic X-ray diffraction of $\text{CuK}\alpha$. JP'972 discloses that the hydroxygallium phthalocyanine disclosed in JP'007 has high sensitivity and excellent chargeability and stability. USPTO translation, paragraph 0027, lines 5-8 and 11.

Art Unit: 1756

Daimon is the US equivalent of JP'007. See the DERWENT abstract Acc. No. 1992-392116. Daimon discloses the JP'007 hydroxyl gallium phthalocyanine characterized in JP'972. Col. 2, line 64, to col. 3, line 1. Daimon teaches that the hydroxygallium phthalocyanine is represented by the formula (I) disclosed at col. 4, lines 34-58, where the benzene rings in the phthalocyanine can be substituted with a halogen. Col. 4, lines 55-56. Daimon teaches that said hydroxyl gallium phthalocyanine has excellent light sensitivity and durability. Col. 2, lines 40-42.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of JP'972 and Daimon, to use the Daimon hydroxygallium phthalocyanine, which comprises a benzene ring substituted with a halogen, exhibiting the particular X-ray diffraction disclosed by Daimon, as the hydroxygallium phthalocyanine charge generating material in the photoconductor rendered obvious over the combined teachings of JP'972, as evidenced by Grant & Hackh's Chemical Dictionary, page 277 and the CRC Handbook of Chemistry and Physics, 48th edition, page B-177, and Yamanami, as evidenced by applicants' admission I. That person would have had a reasonable expectation of successfully obtaining an electrophotographic

Art Unit: 1756

photoconductor having improved sensitivity and durability as taught by Daimon.

9. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP'972, as evidenced by Grant & Hackh's Chemical Dictionary, page 277 and the CRC Handbook of Chemistry and Physics, 48th edition, page B-177, combined with Yamanami, as evidenced by applicant's admission I, as applied to claim 1 above, further combined with US 6,180,301 B1 (Mayo). See the USPTO English-language translation of JP'972 for cites.

JP'972, as evidenced by Grant & Hackh's Chemical Dictionary, page 277 and the CRC Handbook of Chemistry and Physics, 48th edition, page B-177, combined with Yamanami, as evidenced by applicant's admission I, renders obvious the photoconductor described in paragraph 7 above, which is incorporated herein by reference.

JP'972 does not exemplify a phthalocyanine as recited in instant claim 8. However, JP'972 teaches that "[i]f necessary it is possible to mix other phthalocyanine pigments, besides the hydroxygallium phthalocyanine . . . for the charge generating material." USPTO translation, paragraph 0026, lines 1-3.

Mayo teaches a charge generating material comprising a mixture of hydroxygallium phthalocyanine and tetrafluoro-

Art Unit: 1756

hydroxygallium phthalocyanine represented by the formula disclosed at col. 11, lines 28-50, which comprises four benzene rings each substituted with a fluorine atom. Col. 11, lines 52-57, and example X at cols. 18-19. According to Mayo, a photoconductor comprising said mixture has "a range of photosensitivities of from about $100 \text{ V}\cdot\text{cm}^2/\text{erg}$ to about $300 \text{ V}\cdot\text{cm}^2/\text{erg}$, while maintaining a desirable degree of dark decay." Col. 11, lines 57-62; and Table 2 at col. 19.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Mayo, to mix the Mayo tetrafluoro hydroxygallium phthalocyanine with the hydroxygallium phthalocyanine used in the charge generating layer of JP'972, as taught by Mayo, and to use the resultant mixture as the charge generating material in the photoconductor rendered obvious over the combined teachings of JP'972, as evidenced by Grant & Hackh's Chemical Dictionary, page 277 and the CRC Handbook of Chemistry and Physics, 48th edition, page B-177, and Yamanami, as evidenced by applicants' admission I. That person would have had a reasonable expectation of successfully obtaining an electrophotographic photoconductor having a "range of photosensitivities of from about $100 \text{ V}\cdot\text{cm}^2/\text{erg}$ to about $300 \text{ V}\cdot\text{cm}^2/\text{erg}$, while maintaining a desirable degree of dark decay," as taught by Mayo.

Art Unit: 1756

10. Applicant's arguments filed on Jun. 27, 2005, with respect to the rejections set forth in paragraphs 7-9 above have been fully considered but they are not persuasive.

Applicant asserts that the combination of the references do not teach or suggest the layer structure recited in instant claim 1.

However, as discussed in paragraph 7 above, JP'726 and Yamanami each teaches that the undercoat layer can be directly formed on the conductive support as recited in instant claim 1. Moreover, for the reasons discussed in paragraph 7 above, the combined teachings of JP'726, as evidenced by the cited references, and Yamanami, as evidenced by applicant's admission I, render obvious a photoconductor as recited in instant claim 1.

Applicant asserts that Daimon teaches an electrophotographic photoreceptor having hydroxygallium phthalocyanine crystals as the photoconductive material, while the "present invention . . . does not utilize crystals, but instead utilizes 'a charge generation layer containing a charge generation material and organic binder directly on the undercoat layer.'" Applicant submits that "claim 8 . . . does not utilize

Art Unit: 1756

crystals in the charge generation layer as is described in Daimon."

However, instant claim 1 merely recites that the charge generation layer comprises a "charge generation material." Claim 8, which depends from claim 7, which in turn depends from claim 1, recites that the charge generation material can be a phthalocyanine compound comprising a transition metal, a heavy metal, an oxide of a transition metal, an oxide of a heavy metal, a halide of a transition metal, or a halide of an oxide. The claims do not limit the crystalline properties of the phthalocyanine compound. Nor do the claims exclude the Daimon hydroxygallium phthalocyanine crystalline compound. Applicants cannot argue patentability based on limitations that are not present in the claims. Accordingly, the rejection of claim 8 over the combined teachings of the other cited references and Daimon stand.

Applicant further asserts that there is no teaching or suggestion of combining the teachings of Daimon or of Mayo with JP'972 and the other cited references. Applicant asserts that the examiner has improperly used hindsight to combine the references.

With respect to the rejection over Daimon, as discussed in paragraph 8 above, JP'972 teaches that the hydroxygallium

Art Unit: 1756

phthalocyanine can be the hydroxygallium phthalocyanine disclosed in Japanese Patent 05-263007 (JP'007). Daimon is the US equivalent of JP'007. JP'72 and Daimon both teach the advantages of using the hydroxyl gallium phthalocyanine disclosed by Daimon. Thus, the prior art provides reason, suggestion, and motivation for a person having ordinary skill in the art to use the Daimon hydroxygallium phthalocyanine as the hydroxygallium phthalocyanine charge generation material in the photoconductor rendered obvious over the combined teachings of JP'972, as evidenced by the cited references, and Yamanami, as evidenced by applicant's admission I.

With respect to the rejection over Mayo, as discussed in paragraph 9 above, JP'972 teaches that "[i]f necessary it is possible to mix other phthalocyanine pigments, besides the hydroxygallium phthalocyanine . . . for the charge generating material." Mayo teaches the advantages of using a charge generating material comprising a mixture of hydroxygallium phthalocyanine and tetrafluoro hydroxygallium phthalocyanine. Thus, the prior art provides reason, suggestion, and motivation for a person having ordinary skill in the art to use the Mayo mixture of hydroxygallium phthalocyanines as the hydroxygallium phthalocyanine charge generation material in the photoconductor rendered obvious over the combined teachings of JP'972, as

Art Unit: 1756

evidenced by the cited references, and Yamanami, as evidenced by applicant's admission I.

Accordingly, the rejections of claims 1, 2, 5-8, and 10 over the combined teachings of the prior art stand.

11. Claims 3, 4, and 11-13 and claim 9 are allowable over the prior art of record, respectively, for the reasons discussed in the office action mailed on Mar. 25, 2005, paragraph 13, which are incorporated herein by reference, and for the reasons discussed in paragraph 2, supra.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 1756

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (571) 272-1385. The central fax phone number is (571) 273-8300.

Any inquiry of papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JLD

Sep. 1, 2005

Janis L. Dote
JANIS L. DOTE
PRIMARY EXAMINER
GROUP 1500
1700